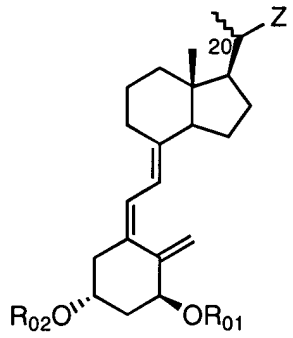
## AMENDMENTS TO THE CLAIMS

**This listing of claims will replace all prior versions, and listings, of claims in the application:**

## LISTING OF CLAIMS:

1-44. (Cancelled)

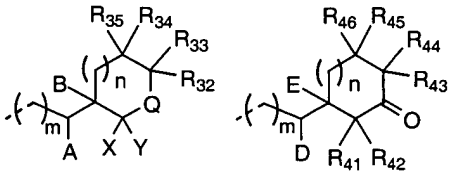
45. (Currently Amended) A vitamin $D_3$ compound expressed by the following ~~general~~ formula (1) or pharmaceutically permissible solvates thereof,




(1)

wherein, $R_{01}$ and $R_{02}$ are each independently a hydrogen atom, a trimethylsilyl group, a triethylsilyl group, a t-butyldimethylsilyl group, an acetyl group, a methoxymethyl group or a tetrahydro-4H-pyran-2-yl group;

Z is one out of the following formulae (1-3) and (1-4),




(1-3) (1-4)

in the above formulae (1-3) and (1-4),

m is an integer of 0 to 2;

n is an integer of 0 to 2;

Q expresses > C(-F)-$R_{31}$ or >N-$R_{31}$, and herein $R_{31}$ is a hydrogen atom, a hydroxyl group, a trifluoromethyl group, a pentafluoroethyl group, a $C_2$-$C_5$ acyloxy group, a $C_1$- $C_4$ alkyloxy group or a $C_1$-$C_4$ alkyl group which may be substituted with a hydroxy group, a $C_2$-$C_5$ acyloxy group or a $C_1$-$C_4$ alkyloxy group;

$R_{32}$, $R_{33}$, $R_{34}$ and $R_{35}$ are identical to or different from each other, and they are a hydrogen atom, a hydroxyl group, a $C_1$-$C_4$ alkyl group or a $C_2$-$C_5$ acyloxy group;

A and B are identical to or different from each other, and they express a hydrogen atom or a hydroxyl group, or together express a single bond and form a double bond in cooperation with the single bond already shown in the formula;

X and Y together express a carbonyl group in cooperation with the carbon atom to which they are bonded, one of them is a hydrogen atom and the other is a hydroxyl group, or one of them is a hydrogen atom and the other is a $C_2$-$C_5$ acyloxy group;

$R_{41}$ and $R_{42}$ are identical to or different from each other, and they express a hydrogen atom, ~~a hydroxyl group,~~ a trifluoromethyl group, a pentafluoroethyl group, a $C_2$-$C_5$ acyloxy

group, a $C_1$-$C_4$ alkyloxy group or a $C_1$-$C_4$ alkyl group which may be substituted with a hydroxyl group, a $C_2$-$C_5$ acyloxy group or a $C_1$-$C_4$ alkyloxy group, or both the members together express a $C_1$-$C_5$ alkylidene group, or they express a $C_3$-$C_6$ cyclic alkyl group in cooperation with the carbon atom to which they are bonded;

$R_{43}$ and $R_{44}$ are identical to or different from each other, and they express a hydrogen atom, ~~a hydroxyl group,~~ a trifluoromethyl group, a pentafluoroethyl group, a $C_2$-$C_5$ acyloxy group, a $C_1$-$C_4$ alkyloxy group or a $C_1$-$C_4$ alkyl group which may be substituted with a hydroxyl group, a $C_2$-$C_5$ acyloxy group or a $C_1$-$C_4$ alkyloxy group, or both the members together express a $C_1$-$C_5$ alkylidene group, or express a $C_3$-$C_6$ cyclic alkyl group in cooperation with the carbon atom to which they are bonded;

$R_{45}$ and $R_{46}$ are identical to or different from each other, and they express a hydrogen atom, a hydroxyl group, a trifluoromethyl group, a pentafluoroethyl group, a $C_2$-$C_5$ acyloxy group, a $C_1$-$C_4$ alkyloxy group or a $C_1$-$C_4$ alkyl group which may be substituted with a hydroxyl group, a $C_2$-$C_5$ acyloxy group or a $C_1$-$C_4$ alkyloxy group;

D and E express each a hydrogen atom, D is a hydroxy group and E expresses a hydrogen atom, D and E together express a single bond and express a double bond in cooperation with the single bond already shown in the formula, or E and $R_{41}$ together express a single bond and express a double bond in cooperation with the single bond already shown in the formula, wherein D expresses a hydrogen atom or a hydroxy group; and $R_{42}$ expresses a hydrogen atom, a hydroxyl group, a trifluoromethyl group, a pentafluoroethyl group, a $C_2$-$C_5$ acyloxy group, a $C_1$-

$C_4$ alkyloxy group or a $C_1$-$C_4$ alkyl group which may be substituted with a hydroxyl group, a $C_2$-$C_5$ acyloxy group or a $C_1$-$C_4$ alkyloxy group,

with the proviso that the following compound (a) is excluded,

(a) a compound in which the groups of one combination out of $R_{32}$ and $R_{33}$, $R_{34}$ and $R_{35}$, ~~$R_{41}$ and $R_{42}$, $R_{43}$ and $R_{44}$,~~ and $R_{45}$ and $R_{46}$ are both hydroxy groups, both alkyloxy groups, or a hydroxy group and an alkyloxy group or where $R_{41}$ and $R_{42}$, $R_{43}$ and $R_{44}$ are both alkyloxy groups.

46. (Currently Amended) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 45, wherein, in the above formula (1), Z is (1-3).

47. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 45, wherein, in the above formula (1), Z is (1-4).

48. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in one out of Claims 45, 46 and 47, wherein, in the above formula (1), $R_{01}$ and $R_{02}$ are both hydrogen atoms.

49. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in one out of Claims 45, 46 and 47, wherein, in the above formula (1), m is 0 or 1.

50. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in one out of Claims 45, 46 and 47, wherein, in the above formula (1), n is 0 or 1.

51. (Currently Amended) A vitamin $D_3$ ~~comppound~~ compound or a pharmaceutically permissible solvate thereof described in Claim 46, wherein, in the above formula (1), Q is > C(-F)-$R_{31}$.

52. (Previously presented) A vitamin $D_3$ derivative or a pharmaceutically permissible solvate thereof described in Claim 46, wherein, in the above formula (1), Q is > N-$R_{31}$.

53. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 46, wherein, in the above formula (1), $R_{31}$ is a hydrogen atom, a hydroxyl group or a $C_1$-$C_4$ alkyl group which may be substituted with a hydroxy group, a $C_2$-$C_5$ acyloxy group or a $C_1$-$C_4$ alkyloxy group.

54. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 46, wherein, in the above formula (1), $R_{32}$, $R_{33}$, $R_{34}$ and $R_{35}$ are each a hydrogen atom.

55. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 46, wherein, in the above formula (1), A and B are both hydrogen atoms, A is a hydroxyl group and B is a hydrogen atom, or A and B together express a single bond and form a double bond in cooperation with the single bond already shown in the formula.

56. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 46, wherein, in the above formula (1), X and Y together express a carbonyl group in cooperation with the carbon atom to which they are bonded.

57. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 47, wherein, in the above formula (1), $R_{41}$ and $R_{42}$ are both hydrogen atoms or together express a methylene group.

58. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 47, wherein, in the above formula (1), $R_{43}$ and $R_{44}$ are both hydrogen atoms or together express a methylene group.

59. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 47, wherein, in the above formula (1), $R_{45}$ and $R_{46}$ are both hydrogen atoms.

60. (Previously presented) A vitamin $D_3$ compound or a pharmaceutically permissible solvate thereof described in Claim 47, wherein, in the above formula (1), D and E are both hydrogen atoms, D and E together express a single bond and form a double bond in cooperation with the single bond already shown in the formula, or D is a hydrogen atom and E and $R_{41}$ together express a single bond and express a double bond in cooperation with the single bond already shown in the formula.

61. (Previously presented) A pharmaceutical composition composed of a vitamin $D_3$ compound or pharmaceutically permissible solvate thereof described in claim 45 and a pharmaceutically permissible carrier.

62. (Previously presented) A method for treating an inflammatory respiratory disease comprising administering to a subject a therapeutically effective amount of a vitamin $D_3$ compound according to claim 45.

63. (Previously presented) A method for treating an inflammatory respiratory disease according to claim 62, wherein the inflammatory respiratory disease is at least one selected from the group consisting of acute upper airway infection, chronic sinusitis, allergic rhinitis, chronic lower airway infection, pulmonary emphysema, pneumonia, bronchial asthma, tuberculosis sequela, acute respiratory distress syndrome, cystic fibrosis and pulmonary fibrosis.

64. (Previously presented) A method of treating an inflammatory respiratory disease according to claim 63, wherein the inflammatory respiratory disease is an acute upper airway infection selected from at least one of the group consisting of common cold, acute pharyngitis, acute rhinitis, acute sinusitis, acute tonsillitis, acute epiglottis and acute bronchitis.

65. (Previously presented) A method of treating an inflammatory respiratory disease according to claim 64, wherein the inflammatory respiratory disease is a chronic lower airway infection selected from at least one of the group consisting of chronic bronchitis, diffuse panbronchiolitis and bronchiectasis.

66. (Previously presented) A method of treating a disease selected from the group consisting of malignant tumors, rheumatoid arthritis, osteoporosis, diabetes mellitus, hypertension, alopecia, acne, psoriasis, and dermatitis, comprising administering to a subject a therapeutically effective amount of a vitamin $D_3$ compound according to claim 45.

67. (Previously presented) A method of treating hypercalcemia attributable to vitamin D excess, comprising administering to a subject a therapeutically effective amount of a vitamin $D_3$ compound according to claim 45.

68. (Previously presented) A method of treating hypopararthyroidism, comprising administering to a subject a therapeutically effective amount of a vitamin $D_3$ compound according to claim 45.

69. (Previously presented) A method of treating a metabolic disorder of cartilage, comprising administering to a subject a therapeutically effective amount of a vitamin $D_3$ compound according to claim 45.